

U.S.S.N. 09/909,574

Filed: July 20, 2001

AMENDMENT AND RESPONSE TO OFFICE ACTION

Remarks

Claims 1-4 and 6-10 are pending. Claims 1, 4, 6, 7, and 10 have been amended. Claims 5 and 11-21 have been canceled. New claims 22 and 23 have been added. Support for new claims 22 and 23 can be found, for example, at lines 24-3, bridging pages 2 and 3; and claim 11 as originally filed. Claims 1 and 10 have been amended to clarify the monomers that are polymerized. Support for the amendments to claims 1 and 10 can be found, for example, at lines 24-3, bridging pages 2 and 3. Claims 4, 6, and 7 were amended to clarify the hydroxyalkanoate as being monomeric.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 1-3 and 5-7 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully traverse this rejection to the extent that it is applied to the claims as amended.

Claim 1 is drawn to a method for producing polyhydroxyalkanoates by providing genetically engineered organisms which can convert diols into hydroxyalkanoate monomers.

The hydroxyalkanoate monomers are now specified as being *4-hydroxybutyrate, 2-*

hydroxybutyrate, 4-hydroxyvalerate, 5-hydroxyvalerate, 6-hydroxyhexanoate, 2-

hydroxyethanoate, 2-hydroxypropionate, or 3-hydroxyhexanoate. These specific monomers are produced by the enzyme catalyzed conversion of suitable diols.

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Rejection Under 35 U.S.C. § 102

Claim 10 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,329,183 to Skraly *et al.* ("Skraly1") or U.S. Patent No. 6,576,450 to Skraly *et al.* ("Skraly2"). Applicants respectfully traverse this rejection to the extent that it is applied to the claims as amended.

Newly amended claim 10 is directed to a genetically engineered organism for making polyhydroxyalkanoates of a defined molecular weight that are formed from specified monomers, 4-hydroxybutyrate, 2-hydroxybutyrate, 4-hydroxyvalerate, 5-hydroxyvalerate, 6-hydroxyhexanoate, 2-hydroxyethanoate, 2-hydroxypropionate, and 3-hydroxyhexanoate.

Claims 1-16 of Skraly1 and Skraly2 are directed to methods for producing polyhydroxyalkanoates that require providing diols which can be converted into 3-hydroxypropionate or 3-hydroxyvalerate monomers for the production of polyhydroxyalkanoates that harbor the monomers.

There is now no overlap between the claims in this application and the disclosure and claims in either of the Skraly1 and Skraly2 patents. Therefore the claims as amended are novel over Skraly1 or Skraly2.

Double Patenting Rejection

Claim 10 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9 and 16 of Skraly1. In view of the foregoing discussion and the amendments to the claims, this rejection is respectfully traversed. There is no

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overlap, nor has any reference been cited, which would make obvious the current claims from claims defining a method of making polymers containing 3-hydroxypropionate or 3-hydroxyvalerate.

Claim 10 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 9 and 16 of Skraly2. This rejection is also traversed in view of the foregoing discussion and the amendments to the claims. There is no overlap, nor has any reference been cited, which would make obvious the current claims from claims defining a method of making polymers containing 3-hydroxypropionate or 3-hydroxyvalerate.

Allowance of claims 1-4, 6-10, 22, and 23, as amended, is respectfully solicited.

Respectfully submitted,

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Date: February 23, 2004

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